VPDES PERMIT FACT SHEET

This document gives pertinent information concerning the reissuance of the VPDES permit listed below. This permit is being processed as a minor, industrial permit. The effluent limitations contained in this permit will maintain the Water Quality Standards of 9 VAC 25-260 et seq. The discharge results from treated wastewater and non-contact cooling water from a menhaden fish processing plant. This permit action consists of updating and adding new special conditions, re-evaluating monitoring and toxicity testing, and groundwater monitoring requirements, establishing limitations, and updating the permit to reflect process changes at the facility. SIC Code: 2077

1. **Facility Name:** Omega Protein, Inc.- Reedville
   Mailing Address: P.O. Box 175
   Reedville, VA 22539

   Location: 610 Menhaden Road
   Reedville, VA 22539
   Northumberland County

2. **Permit Number:** VA0003867
   Existing Permit Expiration Date: June 9, 2016

3. **Owner Contact Name:** Mr. William E. Purcell
   Title: Environmental Manager
   Permit Owner: Omega Protein, Inc.
   Telephone No: 804-453-4211

4. **Application Complete Date:** December 11, 2015
   Permit Drafted By: Laura Galli Date: February 18, June 27, 2016
   Reviewed By: Joy Abel Date: March 8, 2016
   Kyle Winter Date: June 28, 2016

   Public Notice Dates: TBD
   Public Comment Period: TBD
   Newspaper: Northumberland Echo

5. **Receiving Stream Name:** Cockrell Creek (Outfall 995)
   Unnamed Tributary to Cockrell Creek (Outfall 002)
   Basin: Chesapeake Bay, Atlantic Ocean, and Small Coastal Basins
   Sub-basin: N/A
   Section: 2
   Class: II
   Special Standards: a
   River Mile: Outfall 002: 7-XAN000.14 Outfall 995: 7-COC001.0
   7-Day, 10-Year Low Flows: N/A: Saltwater
   Tidal? Yes
   On 303(d) List? Yes

   See Flow Frequency Memo dated January 7, 2016 (**Attachment A**)

6. **Operator License Requirements** (9 VAC 25-790-300): Class III

7. **Reliability Class** (9 VAC 25-790-70): Not Applicable

8. **Permit Characterization:**

☒ Private ☐ Federal ☐ State ☐ POTW

☐ Possible Interstate Effect ☐ Interim Limits in Other Document (attach to FS)

9. **Discharge Description**

Outfall Number	Discharge Source	Treatment	Daily Flow*
002	Evaporator and Dryer Condensate, Boiler Blowdown (*Includes 1-4 gpm wastewater from the fish oil processing facility*), Cooling Water Blowdown	Ammonia Stripping	0.114 MGD long term average 0.160 MGD maximum 30 day value 0.283 MGD maximum daily value
995	Non-contact Cooling Water	None	5.096 MGD long term average 6.821 MGD maximum 30 day value 8.424 MGD maximum daily value
-	Refrigerated Water (from Fishing Vessels)	None	Approximately 0.003 to 0.005 MGD maximum daily value

*Flows as reported on Form 2C received on October 28, 2015.

See **Attachment B** for facility operations diagram and water usage.

Omega Protein processes menhaden by cooking the fish, pressing and separating the oil and solids, and evaporating the water to leave fish meal and oil. The typical fishing season lasts for about 200 days, beginning in May and ceasing approximately the first week of December. Omega currently owns and operates ten fishing vessels capable of carrying 1.2 to 2.2 million fish each. While at sea, the fishing vessels take on seawater that is chilled and used for refrigeration of the catch to keep fish cold in the ship holds until they are offloaded at the dock. *Refrigerated* water is defined as seawater taken on by the fishing vessel during fishing operations and that is run through the vessel's chillers to lower the water temperature to approximately 36°F, and immediately discharged to maintain stability of the vessel. *Refrigeration* water is defined as the refrigerated water that is kept in the vessels to maintain the fish fresh until offload at the plant. See **Attachment K** for additional refrigerated and refrigeration water discussion.

Once at the dock, the ships offload the catch by hydraulic transfer. Residual refrigeration water in the fish holds, fresh creek water used to prime the fish pumps and any liquids given up by the fish during the transfer process are considered bail water. Bail water is stored in above ground tanks on site until disposal; however, some residual bail water is processed through the plant with the catch and discharged at Outfall 002. The bail water stored on site is barged to the Atlantic Ocean for disposal. The discharge of fish waste is allowed in international waters under The Marine Protection, Research, and Sanctuaries Act (Title 33 Chapter 27 Subpart I Section 1412(d)). The discharge of bail water to state waters other than via Outfall 002 and in accordance with Part I.A.1 of the permit is not authorized by the permit.

As fish are processed, wastewater from the fish cooker, identified as stickwater, is pressed and centrifuged to a consistency of 10% solids. The stickwater is further evaporated to a condensate consisting of approximately 50 percent solids. This includes wastewater generated from the fish oil processing facility at the plant. Currently, condensate is treated through ammonia strippers, and then discharged from Outfall 002 into an unnamed tributary of Cockrell Creek. A portion of the treated water is reused within the plant as cooling water, vacuum pump seal water, and for plant wash down. Reuse of some of the treated water has resulted in a decrease in flows from Outfall 002. During the 2011-2016 permit term, the permittee has removed the aerated ponds, DAF, and disinfection units from the treatment train (see **Attachment B**), although the ponds have been allowed to stay in place to be used in the case of an emergency for storage.

Outfalls 002 and 995 discharge to an unnamed tributary of Cockrell Creek and Cockrell Creek, respectively. Portions of Cockrell Creek were determined to be impaired for fecal coliform and Enterococci, and a TMDL was developed for Cockrell Creek and approved by EPA on December 8, 2008. As part of the TMDL development, DEQ conducted a special study in Cockrell Creek around the Omega Protein facility from

August 2006 to February 2007. Results indicated the high presence of bacteria in the waters surrounding the facility, and a Bacteria Source Tracking (BST) analysis performed on samples collected near the facility indicated the presence of bacteria of human origin. At the time of TMDL development it was believed that the facility was a source of bacteria. Omega Protein was given WLAs of 9.97E+09 cfu/day for fecal coliform and 2.49E+10 cfu/day for Enterococci in the TMDL. Effluent limitations for fecal coliform and Enterococci were placed in the 2011 permit in accordance with the state water control law that requires that permits are issued in accordance with water quality planning documents.

Since the TMDL development, Omega has contended that there is no source of bacteria, human or other, from their operations and that the high concentrations of bacteria in Cockrell Creek are the result of wildlife, specifically seagulls, attracted to the fish processing facility. Wastewater generated and discharged from Outfall 002 is sterile as it discharges from the ammonia stripper. Additionally, non-contact cooling water is discharged from Outfall 995. In-take water for the non-contact cooling process comes from Cockrell Creek; therefore, the presence of bacteria in the creek results in the measured bacteria after the 40-60 second pass through for cooling. In 2012 the facility partnered with the Virginia Institute of Marine Science (VIMS), an academic research facility, to further investigate the source of bacteria. The investigation concluded that there are no bacteria of human origin and the presence of the high concentrations of bacteria are primarily from wildlife.

After review, DEQ staff accepted the study from VIMS and agreed that if the source of the bacteria is wildlife, it is not appropriate for a WLA to be assigned to Omega Protein. DEQ notified EPA in a letter dated October 29, 2013 of DEQ's intent to transfer the facility's existing WLA to the future growth allocation in the Cockrell Creek TMDL. Because of this transfer, bacteria limitations on the facility's discharge no longer apply, and these limitations were removed during the 2015 permit modification.

10. **Sludge Use or Disposal**: Not Applicable

11. **Discharge Location Description***:* This facility discharges to Cockrell Creek and an unnamed tributary to Cockrell Creek, both of which are tributaries of the Chesapeake Bay.

    Name of USGS topo map: 145D Reedville (See **Attachment C**)

12. **Material Storage**: Several chemicals are stored on-site but have limited potential of coming in contact with surface waters. These chemicals include:

    - Marine Paints for touch up work on the menhaden fishing vessels. Brushwork only, no spraying, is done at this facility.
    - There are 9 active Above Ground Storage Tanks on the site that contain petroleum ranging in capacity from 1,000 gallons to 508,000 gallons. The tanks are located inside bermed areas in case of leaks. The facility is subject to the Oil Discharge Contingency Plans (ODCP) under the petroleum regulations because the total capacity of the storage tanks is greater than 25,000 gallons. Tanks storing fish oil are not regulated under the petroleum program but are also stored within bermed areas to contain any product in case of leaks. A description of those tanks storing fish oil are as follows:

Tank No.	Description	Gallons
01	Fish Oil Production	15,645
02	Fish Oil Production	24,000
03	Fish Oil Production	24,000
04	Fish Oil Production	20,000
05	Fish Oil	132,193
06	Fish Oil	58,752
07	Fish Oil	508,144
08	Fish Oil	308,378
09	Fish Oil	293,760
10	Fish Oil	93,861
24	Fish Oil	308,378
27	Fish Oil	508,144

47	Fish Oil	308,378
76	Fish Oil	508,144
F11	Fish Oil	17,626
F12	Fish Oil	23,500

13. **Ambient Water Quality Information**:
The Cockrell Creek water body encompasses the area southeast and east of Lilian on Rte. 360 to the confluence with Ingram Bay and Chesapeake Bay, including Cockrell Creek and numerous unnamed coves. This water body is classified as water quality limited. The DEQ maintains a water quality monitoring station located on Cockrell Creek approximately 0.6 miles upstream of the facility at the end of Main Street in Reedville (7-COC001.61). Sampling data for this station are in **Attachment D**.

In the 2014 305(b)/303(d) Integrated Water Quality Assessment Report, the Cockrell Creek segments to which outfalls 002 and 995 discharge are considered Category 5D waters ("The Water Quality Standard is not attained where TMDLs for a pollutant(s) have been developed but one or more pollutants are still causing impairment requiring additional TMDL development."). The Aquatic Life Use remains impaired due to inadequate submerged aquatic vegetation (SAV) in the Chesapeake Bay 5 Mesohaline (CB5MH) estuary; estuarine bioassessment is an observed effect. The Fish Consumption Use is impaired due to a VDH Fish Consumption Advisory for PCBs; arsenic is an observed effect due to a screening value exceedance. The Recreation Use is impaired due to enterococci exceedances. The Wildlife Use is fully supporting. In addition, the Shellfish Use is considered removed for both segments.

During a 1979 modeling effort by VIMS, the dischargers on Cockrell Creek were allocated 5,000 lbs/day of cBOD5 "in order that 5.0 mg/L of DO will be maintained in the upper layer of that receiving stream". As 5.0 mg/L was the dissolved oxygen water quality standard at the time, Cockrell Creek was considered to be fully allocated and is therefore considered a Tier 1 water.

The discharge is within the study area for the Cockrell Creek Shellfish TMDL, which was approved by the EPA on 12/8/2008 and by the SWCB on 4/28/2009. The facility was originally assigned a fecal coliform wasteload allocation of 9.97E+09 MPN/day to address the Shellfish Use impairment. In addition, the discharge received an enterococci wasteload allocation of 2.49E+10 MPN/day in order to address the Recreation Use impairment. In 2014, the wasteload allocations were reassigned to future growth using DEQ's track-and-roll modification process and the facility is not currently assigned a wasteload allocation for bacteria.

Due to the nature of the operations of the fish processing plant, the facility is not expected to contribute PCBs or arsenic that may cause further water quality concerns.

This facility discharges directly to Cockrell Creek and an unnamed tributary to Cockrell Creek in the Chesapeake Bay watershed in segment CB5MH.The receiving stream has been addressed in the Chesapeake Bay TMDL, approved by EPA on December 29, 2010. The TMDL addresses dissolved oxygen (DO), chlorophyll a, and submerged aquatic vegetation (SAV) impairments in the main stem Chesapeake Bay and its tidal tributaries by establishing non-point source load allocations (LAs) and point-source waste load allocations (WLAs) for Total Nitrogen (TN), Total Phosphorus (TP) and Total Suspended Solids (TSS) to meet applicable Virginia Water Quality Standards contained in 9VAC25-260-185. This facility is considered a Significant Chesapeake Bay wastewater discharge, and has been assigned a TN WLA of 21,213 pounds per year, a TP WLA of 1,591 pounds per year, and a TSS WLA of 352,836 pounds per year.

Implementation of the Chesapeake Bay TDML is currently accomplished in accordance with the Commonwealth of Virginia's Phase I Watershed Implementation Plan (WIP), approved by EPA on December 29, 2010. The approved WIP recognizes that the TMDL nutrient WLAs for Significant Chesapeake Bay wastewater dischargers are set in two regulations: 1) the Water Quality Management Planning Regulation (9VAC25-720); and 2) the "General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed of Virginia" (9VAC25-820). The WIP further outlines that since TSS discharges from wastewater facilities represent an insignificant portion of the Bay's total sediment load, they may be considered in the

aggregate. The WIP establishes that wastewater discharges with technology-based TSS limits are considered consistent with the TMDL.

40 CFR 122.44(d)(1)(vii)(B) requires permits to be written with effluent limits necessary to meet water quality standards and to be consistent with the assumptions and requirements of applicable WLAs. DEQ has provided coverage under the VPDES Nutrient General Permit (GP) for this facility under permit VAN020037. The requirements of the Nutrient GP currently in effect for this facility are consistent with the Chesapeake Bay TMDL. This individual permit includes technology-based TSS limits of 410 Kg/d that are also consistent with the Chesapeake Bay TMDL and WIP. In addition, the individual permit has a BOD limit of 840 Kg/d. Given these limits, this facility can neither cause nor contribute to an observed violation of the standards, and is consistent with the TMDL.

See **Attachment A** for the TMDL Fact Sheets.

14. **Antidegradation Review & Comments: Tier 1** ☒ **Tier 2** ☐ **Tier 3**☐
The State Water Control Board's Water Quality Standards include an antidegradation policy (9 VAC 25-260-30). All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters. The limitations in this permit were developed in accordance with Section 303(d)(4) of the Clean Water Act. Therefore, antidegradation restrictions do not apply.

Cockrell Creek is a tier 1 stream, considered fully allocated, based on the 1976 VIMS model (**Attachment E**) and supporting documentation. The model was performed to model the creek for the menhaden plant limitations and showed a wasteload allocation of 5000 lb/day $cBOD_5$. This wasteload allocation was split between the two menhaden plants on the creek at the time, and an amount (100 lb/day) was delegated to the Reedville WWTP, located upstream of the Omega facility. Additionally, Cockrell Creek is considered a tier 1 stream because it is on the 303(d) list for impaired waters. See item 26 of this fact sheet for additional information on impairments.

15. **Site Inspection: Date:** August 27, 2015 Performed by Brad Ricks (See **Attachment F**)

16. **Effluent Screening & Limitation Development**

The reasonable potential analysis is performed by calculating the parameter wasteload allocations based on ambient water quality data for the receiving stream, mixing characteristics between the receiving stream and effluent, and effluent characteristics. This information is entered into the agency established MSTRANTI WLA Spreadsheet to calculate acute, chronic, and human health wasteload allocations. The WLAs are entered into the STATS.exe statistical software application along with effluent monitoring data collected by the permittee as required by the permit application or previous permit to determine the need for permit limitations and, if necessary, calculate the limitations that are protective of water quality.

As part of the reissuance permit application, the permittee performed water quality criteria monitoring to collect data for use in establishing water quality based permit limitations. The permittee provided data on the full list of Attachment A – Water Quality Monitoring for outfalls 002 and 995. The data that was submitted with the application along with the data submitted with the Discharge Monitoring Reports (DMRs) during the 2011 permit term were used to evaluate for reasonable potential of the facility to impact water quality at the receiving stream. For the analysis, receiving stream data was obtained based on ambient water quality data collected from station 7-COC001.61 (**Attachment D**) by the DEQ from 1993 to 2015 and is believed to represent the current ambient water quality of Cockrell Creek. Because flow frequencies cannot be determined for tidal waters, previously determined dilution ratios (1998 model for Outfall 002, see **Attachment G**; default rations for Outfall 995) were used to evaluate the effluent's impact on the waterbody (as recommended in the Flow Frequency Memorandum dated January 7, 2016 -

Attachment A). Documentation of the reasonable potential analysis and permit limitation development for Outfalls 002 and 995 are included in **Attachment H** and **J**, respectively.

Outfall 002

pH: 9 VAC 25-260-50, Class II Waters

BOD_5, TSS, Oil & Grease
The EPA promulgated Effluent Limitations Guidelines for Fish Meal Processing (40 CFR Part 408.150 – Subpart O). Agency staff used the guideline to calculate permit limits based on Best Practical Control Technology Currently Available (BPT) and compare those suggested limits to water quality based calculated limitations (see **Attachment H** for evaluation).

Ammonia
In accordance with GM00-2011, if the facility already has an ammonia limitation, then effluent data that was obtained to demonstrate compliance with that limitation cannot be used to determine if a reasonable potential to cause or contribute to a violation of the standards exists. In these cases, a high fictitious data point (rather than the actual data) should be used to force the program to calculate a limit. The resulting limit can be compared to the existing limit to determine if it is sufficiently stringent. The reasonable potential analysis included in **Attachment H** indicates the need for an ammonia limitation on the discharge of wastewater from Outfall 002 of 32.6 mg/L (monthly average) and 40.2 mg/L (maximum).

Total Phosphorus
A Monthly average limitation of 2.0 mg/L and a weekly average loading of 2.0 kg/day for Total Phosphorus were applied based on Nutrient Enriched Waters regulations and policy in the 2011 Permit. The facility was previously applicable to the NEW-20 standard of the Virginia Water Quality Standards which has since been repealed and replaced with the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Watershed (Nutrient GP). In accordance with GM07-2008, the following actions will take effect with the 2016 permit reissuance:

1) GM07-2008 requires the inclusion of a Watershed General Permit Controls special condition, which waives the requirement to include monthly and weekly average loading limitations for TP upon effective date of the permittee's Nutrient GP. Therefore, the 2.0 kg/d weekly loading limitation is removed. In addition, because the facility's Nutrient GP is already in effect, and since the loading limitation for TP is being removed with the 2016 permit reissuance, this special condition will not be included in the permit.
2) Because no changes in the treatment process have occurred since the assignment of a concentration limitation of 2 mg/L based on the NEW-20 standard, and because GM07-2008 requires an annual average concentration limitation based on the Nutrient Enriched Waters designation, the monthly average concentration limitation of 2 mg/L will be removed, and an annual average concentration limitation of 2 mg/L for TP will be included in the permit.

Metals
Attachment A – Water Quality Monitoring provided with the permit application includes the analyses of all dissolved metals and their quantification limits (QLs). All metals were reported less than the QLs; however, because the QLs provided for arsenic, cadmium, chromium VI, copper, lead, nickel, selenium, silver and zinc are greater than the DEQ recommended QLs, a STATS.exe analysis was conducted for these metals using the provided QLs as actual concentrations. The resulting analyses indicated that no limitation based on acute or chronic toxicity is required for any of the metals analyzed.

Because there is no aquatic life criterion established for antimony, this parameter was compared to its Human Health (HH) WLA from MSTRANTI; because the concentration is well below the HH WLAs, no further evaluation is necessary for this parameter.

Total recoverable barium, total recoverable magnesium, total recoverable manganese, and total recoverable molybdenum were reported with detected concentrations in EPA Form 2C. Because there are no water quality standards for these parameters, a reasonable potential analysis could not be performed to determine if water quality based limitations are needed.

Other Parameters
Attachment A – Water Quality Criteria Monitoring reported detected concentrations for benzo(k)fluoranthene (11.1 ug/L), and cyanide (23 ug/L). A reasonable potential analysis for cyanide shows that no limitation based on acute or chronic toxicity is required (see **Attachment H**). Lastly, benzo(k)fluoranthene was compared to the HH WLA, and because its concentration is below the WLA, no further evaluation is required for this parameter.

Detections were reported in EPA Form 2C for total organic carbon (TOC, 326 mg/L), chemical oxygen demand (COD, 2586 mg/L), fluoride (0.9 mg/L), nitrite + nitrate (0.9 mg/L daily max, 0.075 monthly avg.), total organic nitrogen (TN, 56.8 mg/L daily max, 45.2 mg/L monthly avg.), and sulfate (32.8 mg/L). There are no WQS for these parameters; therefore, a reasonable potential analysis could not be performed to determine if water quality based limitations are needed. However, TN and nitrite+nitrate concentrations in the discharge are regulated by the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Watershed, see section 25 below.

DEQ Toxics Management Policy
See **Attachment I** for Whole Effluent Toxicity data analysis and limitation calculation.

Limitations Applicable to Outfall 002

Parameter	Basis for Limits	Discharge Limits				Monitoring Requirements	
		Monthly Average	Weekly Average	Min	Max	Frequency	Sample Type
Flow (MG)	NA	NL	NA	NA	NL	Continuous	TIRE
Temperature (°C)	1	NL	NA	NA	NL	2 per Week	Immersion Stabilization
pH (S.U.)	1	NA	NA	6.0	9.0	2 per Week	Grab
BOD_5 (Kg/d)	2	470	NA	NA	840	2 per Month	24-HC
TSS (Kg/d)	2	160	NA	NA	410	2 per Month	24-HC
Oil & Grease (Kg/d)	2	25	NA	NA	46	1 per Month	Grab
Ammonia Nitrogen (mg/L)	1	32.6	NA	NA	40.2	2 per Month	24-HC
Total Phosphorus, Year-to-Date Average (mg/L)	3	NL	NA	NA	NL	1 per Month	Calculated
Total Phosphorus, calendar year average (mg/L)	3	2.0	NA	NA	NL	1 per Year	Calculated
WET (TUa)	1	NL	NA	NA	14	1 per 3 Months	24-HC

NL = No Limitation; NA = Not Applicable.
1 = Water Quality Standards (9 VAC 25-260-50)
2 = Federal Effluent Guidelines (40 CFR Part 408.150 – Subpart O) and Permit Writer Judgment

3 = GM07-2008 and General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Watershed

Outfall 995:

pH: 9 VAC 25-260-50, Class II Waters

Copper, Silver and Zinc
Data submitted with the application for dissolved copper (8 ug/L) was used in the reasonable potential analysis utilizing the WLA acute and chronic from MSTRANTI. The STATS.exe evaluation shows that a limitation of 19 ug/L is required to meet water quality standards based on acute and chronic toxicity (see **Attachment J**). Therefore, the 2016 permit will retain the limitation of 19 ug/L total recoverable copper.

Data reported in the application for dissolved silver (50 ug/L) was utilized for the reasonable potential analysis. The STATS.exe evaluation shows that a limitation of 3.8 ug/L for total recoverable silver is required to meet water quality standards based on acute toxicity (see **Attachment J**). This is a more stringent limitation than the limitation included in the 2011 permit. Because the permittee has already demonstrated compliance with such limitation, a schedule of compliance will not be warranted in the 2016 permit.

A concentration of 11 ug/L was provided for dissolved zinc in the permit application. A reasonable potential analysis for this parameter shows that no limitation is required.

Other Metals
All metals, except for copper and zinc, were reported as less than the QLs; however, because the QLs provided for arsenic, cadmium, chromium VI, lead, nickel, and selenium are greater than DEQ's recommended QLs, a STATS.exe analysis was conducted for these metals using the provided QLs as actual concentrations. The resulting analyses indicated that no limitation based on acute or chronic toxicity is required for any of the metals analyzed.

Because there is no aquatic life criterion established for antimony, this parameter was compared to its Human Health WLA from MSTRANTI; because the concentration is well below the HH WLAs, no further evaluation is necessary for this parameter.

Total recoverable aluminum, total recoverable barium, total recoverable boron, total recoverable iron, total recoverable magnesium, and total recoverable manganese, were reported with detected concentrations in EPA Form 2C. Because there are no water quality standards for these parameters, a reasonable potential analysis could not be performed to determine if water quality based limitations are needed.

Other Parameters
Detections were reported in EPA Form 2C for total organic carbon (TOC, 1.79 mg/L), chemical oxygen demand (COD, 458 mg/L), bromide (36 mg/L), fluoride (0.5 mg/L), total organic nitrogen (1.1 mg/L), total phosphorus (0.08 mg/L), sulfate (1300 mg/L), and sulfide (0.6 mg/L). There are no WQS for these parameters; therefore an evaluation against WQS cannot be performed. Monitoring and reporting requirements for sulfides will not be included in the permit as the reported concentration is less than 0.10 mg/L (as per VPDES Permit Manual GM14-2003). The permittee has indicated that a corrosion inhibitor containing phosphorus will be used in the plant's non contact cooling water, thus possibly introducing phosphorus in the non-contact cooling water discharge. In accordance with 9VAC25-196 and GM13-2002, monitoring for total phosphorus should be required when the facility uses additives containing phosphorus. Therefore, quarterly monitoring for this parameter will be added to the 2016 permit.

Temperature:
The previous permit limitation for temperature of 45°C was evaluated based on chronic conditions to determine if the limitation was appropriate to protect against the rise above natural temperature

of more than 3°C as listed in 9 VAC 25-260-60 of the Water Quality Standards. The agency default of 50:1 mixing in tidal waters was used. Additionally, the evaluation used the minimum ambient stream temperature for Cockrell Creek so that the most conservative evaluation was performed. The evaluation is as follows:

[(45°)*(1MGD) + (0.49°C)*(49 MGD)] / 50 MGD = 1.38°C which is the Mixed Temperature
Delta Temperature = 1.38°C – 0.49°C = 0.89°C

The permit limitation of 45°C for temperature is protective of the rise above natural temperature standard. The limitation is being carried forward with this permit reissuance.

Limitations Applicable to Outfall 995

Parameter	Basis for Limits	Discharge Limits				Monitoring Requirements	
		Monthly Average	Weekly Average	Min	Max	Frequency	Sample Type
Flow (MG)	NA	NL	NA	NA	NL	Continuous	Calculated
Temperature (°C)	1	NA	NA	NA	45	1 per Day	Immersion Stabilization
Copper, Total Recoverable (ug/L)	1	19	NA	NA	19	1 per 3 Months	Grab
Silver, Total Recoverable (ug/L)	1	3.8	NA	NA	3.8	1 per 3 Months	Grab
Phosphorus, Total (mg/L)	2	NL	NA	NA	NL	1 per 3 Months	Grab
pH (S.U.)	1	NA	NA	6.0	9.0	5 per Week	Grab

NL = No Limitation; NA = Not Applicable.
1 = Water Quality Standards (9 VAC 25-260-50)
2 = Non-contact Cooling Water General Permit (9VAC25-196 and GM13-2002)

17. **Groundwater Monitoring Data Evaluation:** An evaluation of groundwater data from 2006 through 2015 is provided in **Attachment L**.

18. **Antibacksliding Statement**: All limitations in the proposed permit are the same or more stringent than the limitations in the 2011 permit.

19. **Special Conditions**

Special Condition B.1 - Compliance Reporting
Rationale: Authorized by VPDES Permit Regulation, 9VAC 25-31-190 J 4 and 220 I. This condition is necessary when pollutants are monitored by the permittee and a maximum level of quantification and/or a specific analytical method is required in order to assess compliance with a permit limit or to compare effluent quality with a numeric criterion. The condition also establishes protocols for calculation of reported values.

Special Condition B.2 – Discharge of Refrigerated Water
Rationale: Authorized by EPA Vessel General Permit. The once-through ambient water provision in the general permit authorizes discharges of refrigerated water pierside and elsewhere, without a requirement to discharge to a shore-based facility, when treatment is not available or economically achievable.
Special Condition B.3 – Notification Levels
Rationale: Required by VPDES Permit Regulation, 9VAC25-31-200 A for all manufacturing, commercial, mining, and silvicultural dischargers.

Special Condition B.4 – Materials Handling/Storage
Rationale: 9VAC25-31-50 A prohibits the discharge of any wastes into State waters unless authorized by the permit. Code of Virginia §62.1-44.16 and §62.1-44.17 authorizes the Board to regulate the discharge of industrial waste or other waste.

Special Condition B.5 – Operation and Maintenance Manual Requirement
Rationale: Required by the Code of Virginia § 62.1-44.16; VPDES Permit Regulation, 9VAC25-31-190 E, and 40 CFR 122.41(e). These require proper operation and maintenance of the permitted facility. Compliance with an approved O&M manual ensures this.

Special Condition B.6 – Licensed Operator Requirement
Rationale: Required by VPDES Permit Regulation, 9VAC25-31-200 C and The Code of Virginia §54.1-2300 et seq, Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals Regulations (18VAC160-20-10 et seq.), requires licensure of operators.

Special Condition B.7 – Best Management Practices
Rationale: VPDES Permit Regulation, 9VAC25-31-220 K, requires use of best management practices where applicable to control or abate the discharge of pollutants when numeric effluent limits are infeasible or the practices are necessary to achieve effluent limits or to carry out the purpose and intent of the Clean Water Act and State Water Control Law. Given the nature of the operations at this facility, this special condition reflects the best management practices associated with shipyard and vessel repair rather than the generalized best management plan condition. Conditions related to marine rail carriages have been removed as this does not apply to this facility. There are no graving docks at the site therefore, the shipyard condition Section IN-5, page 18 item a.(11) of the BMPs has not been included. Conditions 7.a.1.).a.(31) and (32) have been included to address specific site specific BMP needs.

Special Condition B.8– Reopeners
TMDL Reopener: Section 303(d) of the Clean Water Act requires that Total Maximum Daily Loads (TMDLs) be developed for streams listed as impaired. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL approved for the receiving stream. The re-opener recognizes that, according to Section 402(o)(1) of the Clean Water Act, limits and/or conditions may be either more or less stringent than those contained in this permit. Specifically, they can be relaxed if they are the result of a TMDL, basin plan, or other wasteload allocation prepared under section 303 of the Act.

Technology Based Nutrients Limitations Rationale: 9VAC 25-40-70 A authorizes the DEQ to include technology-based annual concentration limits in the permits of facilities that have installed nutrient control equipment, whether by new construction, expansion or upgrade. 9 VAC 25-31-390 A authorizes DEQ to modify VPDES permits to promulgate amended water quality standards.

Water Quality Criteria Reopener: VPDES Permit Regulation, 9VAC25-31-220 D requires effluent limitations to be established which will contribute to the attainment or maintenance of the water quality standards.

Special Condition B.9– Facility Closure
Rationale: This condition establishes the requirement to submit a closure plan for the treatment works if the treatment facility is being replaced or is expected to close. This is necessary to ensure industrial sites and treatment works are properly closed so that the risk of untreated waste water discharge, spills, leaks and exposure to raw materials is eliminated and water quality maintained. Section 62.1-44.21 requires every owner to furnish when requested plans, specification, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of state waters, or such other information as may be necessary to accomplish the purposes of the State Water Control Law.

Special Condition B.10– Groundwater Monitoring
Rationale: 9VAC25-280-20. Except where otherwise specified, groundwater quality standards shall apply statewide and shall apply to all groundwater occurring at and below the uppermost seasonal limits of the water table. In order to prevent the entry of pollutants into groundwater occurring in any aquifer, a soil zone

or alternate protective measure or device sufficient to preserve and protect present and anticipated uses of groundwater shall be maintained at all times. 9VAC25-280-60 Groundwater criteria, although not mandatory, also provide guidance in preventing groundwater pollution. Also, State Water Control Law 62.1-44.21 authorizes the Board to request information needed to determinate the discharge's impact on State waters.

Special Condition B.11 – Industrial Concept Engineering Report
Rationale: §62.1-44.16 of the Code of Virginia requires industrial facilities to obtain DEQ approval for proposed discharges of industrial wastewater. A CER means a document setting forth preliminary concepts or basic information for the design of industrial wastewater treatment facilities and the supporting calculations for sizing the treatment operations.

Special Condition B.12 – Storage Ponds
Rationale: The permittee has eliminated the aerated ponds from the treatment train for evaporator condensate; however, the ponds have been left in place to be used on an emergency basis if needed. A minimum free board requirement has been added to prevent the discharge of pollutants to surface waters.

Special Condition B.13 – Bail Water Log
Rationale: State Water Control Law §62.1-44.21 authorizes the Board to request information needed to determine the discharge's impact on State waters. The permittee has indicated that bail water is not discharged to state waters. Recordkeeping is being required to demonstrate the proper handling and disposal of bail water.

Special Condition B.14 – Nutrient Reporting Calculations
Rationale: §62.1-44.19:13 of the Code of Virginia defines how annual nutrient loads are to be calculated; this is carried forward in 9VAC25-820-70. As annual concentrations (as opposed to loads) are limited in the individual permit, this special condition is intended to reconcile the reporting calculations between the permit programs, as the permittee is collecting a single set of samples for the purpose of ascertaining compliance with two permits.

Special Condition B.15 – Suspension of Concentration Limits for E3/E4 Facilities
Rationale: 9VAC25-40-70.B authorizes DEQ to approve an alternate compliance method to the technology-based effluent concentration limitations as required by subsection A of this section. Such alternate compliance method shall be incorporated into the permit of an Exemplary Environmental Enterprise (E3) facility or an Extraordinary Environmental Enterprise (E4) facility to allow the suspension of applicable technology based effluent concentration limitations during the period the E3 or E4 facility has a fully implemented environmental management system that includes operation of installed nutrient removal technologies at the treatment efficiency levels for which they were designed.

Part I.C: Whole Effluent Toxicity Testing Requirements – Outfall 002
Rationale: VPDES Permit Regulation, 9VAC25-31-210 and 220 I, requires monitoring in the permit to provide for and assure compliance with all applicable requirements of the State Water Control Law and the Clean Water Act.

Part I.D: §316(b) Cooling Water Intake Structure Special Conditions

a. Special Condition D.1 – Interim §316(b) Best Technology Available (BTA)
   Rationale: VPDES Permit Regulation 9VAC25-31-165.C requires existing facilities with cooling water intake structures to meet the requirements under §316(b) of the Clean Water Act (CWA), determined by the department on a case-by-case, best professional judgment basis. DEQ staff have determined the permitted facility to be subject to the §316(b) requirements because it is a point source that uses or proposes to use one or more cooling water intake structures that withdraws waters of the U.S. for cooling purposes.

   Federal regulations at 40 CFR §§125.98(b)(5) and (b)(6) mandate that for permits issued before July 14, 2018, for which an alternate schedule has been established for the submission of information required by 40 CFR §122.21(r), must include interim BTA requirements in the permit based on best

professional judgment on a site-specific basis. This special condition outlines interim BTA practices to minimize impingement and entrainment mortality and adverse impacts to aquatic organisms.

The facility operates a once-through cooling water system detailed in the 316(b) questionnaire dated May 24, 2016 (see **Attachment O**). This information describes the use of metal barrier nets, expanded metal screen, seasonal flow reductions, and wastewater reuse. During the 2016 off season, the old evaporators were taken out of service and a new Waste Heat Evaporator (WHE) was installed, which has reduced significantly the facility's water withdrawal needs for cooling purposes (as confirmed by the May 2016 cooling water discharge flow at outfall 995). In addition, the facility is planning to install a new steam dryer and cooling tower in the up-coming off season and take two of the three existing steam dryers out of service. The vapors will be condensed from the existing and new steam dryer in the new cooling tower. The cooling tower will operate like the existing cooling tower and use evaporator condensate and well water as feed water. Consequently, use of creek water as a cooling source will cease once the new system is in place. Special conditions I.D.2.a through I.D.2.e shall apply until such time as the surface water withdrawals for cooling water purposes cease and the cooling water intake structures are removed.

b. Special Condition D.2.a – Impingement and Entrainment Control Technology Preventative Maintenance
Rationale: VPDES Permit Regulation 9VAC25-31-190.E requires the permittee, at all times, to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit.

c. Special Condition D.2.b – Alternate Schedule for Submittal of 40 CFR §122.21(r) Information
Rationale: VPDES Permit Regulation 9VAC25-31-165.C requires existing facilities with cooling water intake structures to meet the requirements under §316(b) of the CWA determined by DEQ on a case-by-case, best professional judgment basis. Federal regulations at 40 CFR §125.95(a)(2) allow for owners or operators of a facility whose permit expires prior to July 14, 2018 to request the Director establish an alternate schedule for the submission of the information required in 40 CFR §122.21(r) when making application for this permit. If the owner or operator of the facility demonstrates that it could not develop the required information by the applicable date of submission, DEQ must establish an alternate schedule for the submission of the required information.

DEQ staff received a written request from the permittee, dated May 24, 2016, requesting an alternate schedule (see **Attachment O**). Upon review of the request, DEQ staff determined the permittee successfully demonstrated the inability to reasonably develop the required information by their reissuance application due date, thereby qualifying for an alternate schedule to be established.

Federal regulations at 40 CFR §125.95(a) requires the review, for completeness, of the materials submitted by the applicant under 40 CFR §122.21(r) at the time of any application for a subsequent permit. To facilitate a determination of a timely and complete reissuance application in compliance with Part II.M of this permit, the Alternate Schedule for this facility has been established to require submission of the 40 CFR §122.21(r) information to the DEQ Piedmont Office by no later than 270 days prior to the expiration date of this permit.

d. Special Condition D.2.c - Visual or Remote Inspections
Rationale: VPDES Permit Regulation 9VAC25-31-210.A authorizes the Board to establish permit conditions to provide for and assure compliance with all applicable requirements of the law, the CWA, and regulations. Federal regulation at 40 CFR §125.96(e) requires visual inspections or the employment of remote monitoring devices to be conducted at least weekly during the period any cooling water intake structure is in operation, to ensure any technologies operated are maintained and operated to function as designed, including those installed to protect federally-listed threatened or endangered species or designated critical habitat.

40 CFR §125.96 authorizes DEQ to establish monitoring requirements and specific protocols as appropriate. Provisions for inspection waivers, adverse weather conditions, and deficiency discoveries were developed, using comparable provisions found in the VPDES General Permit for Stormwater Discharges Associated with Industrial Activity, 9VAC25-151-70, Part I.A.2.e, A.3. and A.6.b as a foundation.

e. Special Condition D.2.d – Annual Certification Statement Requirements
Rationale: VPDES Permit Regulation 9VAC25-31-210.A authorizes the Board to establish permit conditions to provide for and assure compliance with all applicable requirements of the law, the CWA, and regulations. Federal regulations at 40 CFR §125.97(c) requires the permittee to annually submit a certification statement signed by a responsible corporate officer reporting whether there have been substantial modifications to the operation at any unit at the facility that impacts cooling water withdrawals or operation of the cooling water intake structures, or if information contained in the previous year's annual certification remains pertinent.

f. Special Condition D.2.e - Measures to protect Federally-listed Threatened or Endangered (T&E) species, designated critical habitat, and fragile species or shellfish
Rationale: VPDES Permit Regulation 9VAC25-31-165.C requires existing facilities with cooling water intake structures to meet requirements under section 316(b) of the Clean Water Act determined by the department on a case-by-case, best professional judgment (BPJ) basis. 40CFR §§125.94(a)(1), 125.94(g), 125.96(g), and 125.97(g) authorize DEQ to establish additional control measures, monitoring, and reporting requirements in the permit designed to minimize incidental take, reduce or remove more than minor detrimental effects to Federally-listed threatened or endangered species or designated critical habitat, or avoid jeopardizing Federally-listed species or destroying or adversely modifying designated critical habitat (e.g. prey base).

State Water Control Law §62.1-44.5.A.3 and VPDES Permit Regulation 9VAC25-31-50.A.2 prohibits the alteration of the physical, chemical or biological properties of State waters and making them detrimental to animal or aquatic life, except in compliance with a permit issued by the Board. In addition, VPDES Permit Regulation 9VAC25-31-190.E requires the permittee, at all times, to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit.

State Water Control Law §62.1-44.21 and VPDES Permit Regulation 9VAC25-31-190.H authorizes the Board to require owners to furnish plans, specifications, and other pertinent information as may be necessary to accomplish the purposes of the State Water Control Law. In addition, federal regulations at 40CFR §125.94(g) and §125.97(e) authorize DEQ to establish additional permit monitoring and reporting requirements. Information provided by the permittee under this special condition may be used as a foundation to address other reporting requirements of 40CFR §125.98(k).

g. Special Condition D.3 - Endangered Species Act Compliance
Rationale: State Water Control Law §62.1-44.5.A.3 and VPDES Permit Regulation 9VAC25-31-50.A.2 prohibits the alteration of the physical, chemical or biological properties of State waters and making them detrimental to animal or aquatic life, except in compliance with a permit issued by the Board.

In addition, VPDES Permit Regulation 9VAC25-31-210.A authorizes the Board to establish permit conditions to provide for and assure compliance with all applicable requirements of the law, the CWA and regulations. 40 CFR §125.98(j) stipulates that nothing in Subpart J of Part 125 of the Code of Federal Regulations authorizes the take, as defined at 16 U.S.C. 1532(19), of threatened or endangered species of fish or wildlife. Such take is prohibited under the Endangered Species Act unless it is exempted pursuant to 16 U.S.C 1536(o) or permitted pursuant to 16 U.S.C 1539(a). Absent such exemption or permit, any facility must not take threatened or endangered species. 40 CFR §125.98(b)(1) requires all NPDES permits for facilities subject to §316(b) of the Clean Water Act to include as a permit condition the specific language of this special condition.

Part II Conditions Applicable to All Permits
Rationale: VPDES Permit Regulation, 9VAC25-31-190 requires all VPDES permits to contain or specifically cite the conditions listed.

20. **NPDES Permit Rating Work Sheet:** Total Score **66.5** (**See Attachment M)**

21. **Changes to the Permit:**

Changes in Part I.A.1	**Effluent Limits**		**Monitoring Requirements**		**Reason**
	From	**To**	**From**	**To**	
Flow (MGD)	No change				
Temperature (°C)	No change				
pH (SU)	No change				
BOD_5 (mg/L)	No change				
TSS (mg/L)	No change				
Oil and Grease (mg/L)	No change. Sample type changed from 24HC to Grab in accordance with 40CFR136 and GM14-2003.				
Ammonia Nitrogen (mg/L)	No change				
Total Phosphorus (Kg/d)	2.0 weekly average	---	1 per Week	---	TP loading limitation removed in accordance with GM07-2008.
Total Phosphorus, Year to date Average (mg/L)	---	NL	---	1 per Month	Monitoring requirements added in accordance with GM07-2008.
Total Phosphorus, Calendar Year Average (mg/L)	---	2.0	---	1 per Year	Limitation added in accordance with GM07-2008.
WET	---	---	1 per Quarter	1 per 3 Months	Updated in accordance with Agency policy.

Other Changes to Notes in Part I.A.1
24-HC wording update.
1 per 3 Months definition added.
Footnote 6 and 7 added to clarify total phosphorus monitoring and reporting requirements.

Changes in Part I.A.2	**Effluent Limits**		**Monitoring Requirements**		**Reason**
	From	**To**	**From**	**To**	
Flow (MGD)	No change				
Temperature (°C)	No change				
Copper, Total Recoverable (mg/L)	No Change		1 per Quarter	1 per 3 Months	Monitoring frequency wording updated in accordance with Agency policy.
Silver, Total Recoverable (mg/L)	4.0 Monthly Average 4.0 Maximum	3.8 Monthly Average 3.8 Maximum	1 per Quarter	1 per 3 Months	Monitoring frequency wording updated in accordance with Agency policy.
pH (SU)	No change				
Total Phosphorus (mg/L)	---	NL	---	1 per 3 Months	Monitoring requirements added in accordance with 9VAC25-196 and GM13-2002

Other Changes to Notes in Part I.A.2
1 per 3 Months definition added.

Changes to Permit Special Conditions:

From	To	Rationale
Part I.B.1	Part I.B.1	Compliance Reporting: updated in accordance with GM14-2003.
Part I.B.2	Part I.B.2	Discharge of Refrigerated Water: Revised title and language to authorize exclusively the discharge of the refrigerated water from the fish holds during fishing operations whenever necessary to maintain list, trim and the holding capacity of the vessels. Monitoring requirements deleted as refrigeration water has been fully characterized during the 2011 permit cycle.
Part I.B.5	Part I.B.5	Operation and Maintenance Manual Requirements: updated in accordance with GM14-2003.
Part I.B.6	Part I.B.6	Licensed Operator Requirement: updated in accordance with GM14-2003.
Part I.B.7	Part I.B.7	Best Management Practices: section (31) deleted as deemed redundant. Section (32) deleted as already incorporated in section (18).
Part I.B.9	Part I.B.9	Facility Closure: updated in accordance with GM14-2003.
Part I.B.10	Part I.B.10	Groundwater Monitoring: title and content revised to require the submittal if a revised groundwater monitoring plan in accordance with the recommendations included in **Attachment L**.
Part I.B.11	Removed	Water Quality Criteria Monitoring: condition removed as the permittee has complied with its requirements.
Part I.B.12	I.B.11	Industrial Concept Engineering Report: updated title in accordance with GM14-2003.
Part I.B.13	Part I.B.12	Storage Ponds: renumbered.
Part I.B.14	Part I.B.13	Bail Water Log: renumbered.
---	Part I.B.14	Nutrient Reporting Calculations: added in accordance with GM07-2008.
---	Part I.B.15	Suspension of Concentration Limits for E3/E4 Facilities: added in accordance with GM07-2008.
Part I.C	Part I.C	WET Testing Requirements – Outfall 002: revised section 6 to include new test period and DMR/report due dates.
---	Part I.D	§316(b) Cooling Water Intake Structures: Added in accordance with new DEQ guidance for facilities subject to the rule.
Attachment A	---	Attachment A removed as permittee has provided the required analyses.

22. **Variances/Alternate Limits or Conditions**: None

23. **Public Notice Information required by 9 VAC 25-31-280 B**:

Comment Period: Start Date: XXXX, 2016 End Date: XXXX, 2016
Published Dates: XXXX, 2016 and XXXX, 2016
Publishing Newspaper: *The Rappahannock Record*

All pertinent information is on file and may be inspected, and copied by contacting

Ms. Laura Galli
Virginia DEQ Piedmont Regional Office
949-A Cox Road
Glen Allen, VA 23060
Telephone No. (804) 527-5095
Email Address: laura.galli@deq.virginia.gov

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone

number of the writer and of all persons represented by the commenter/requester, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit. Requests for public hearings shall state 1) the reason why a hearing is requested; 2) a brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit; and 3) specific references, where possible, to terms and conditions of the permit with suggested revisions. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given. The public may review the draft permit and application at the DEQ Piedmont Regional Office by appointment.

24. **Additional Comments**:

a. Previous Board Action: The Facility was issued a Consent Order dated September 23, 2011.

b. Staff Comments:

1) Planning conformance statement: The discharge is in conformance with the existing planning documents for the area.
2) Controversial Permit Assessment: This permit is expected to be controversial. During the term of the 2011 permit as well as years prior, there has been significant interest from the public and nonprofit environmental groups regarding the permitted activities at this facility.
3) Fees: Annual maintenance fees are up to date and were deposited on September 18, 2015.
4) E-DMR Participation: The facility has been enrolled in the eDMR program since May 2008.
5) Virginia Environmental Excellence Program (VEEP): This facility is not a participant in the VEEP program.
6) Effluent Monitoring Reductions: per GM 14-2003, the facility is not eligible for monitoring reductions because of the seasonal nature of the discharge.
7) General Permit Registration:
   Nutrient - The permittee is considered a significant discharger of nutrients to the Chesapeake Bay watershed and is subject to the requirements of the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Watershed. The Total Nitrogen and Total Phosphorus calendar year load limits associated with this facility are included in the current Registration List for the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Dischargers and Nutrient Trading in the Chesapeake Watershed in Virginia, under registration number VAN020037.
8) Permit Expiration Date: The permit expiration date was shortened to occur at the end of the month prior to the 5-year anniversary of the permit. This is done to begin each future permit cycle at the start of a monitoring period.
9) Limitations and monitoring for stormwater are required under the VPDES permit regulation, 9 VAC 25-31-220A, and EPA's stormwater effluent limitation guidelines in the Code of Federal Regulations at 40 CFR Part 429, Part 418, Part 443, Part 411, and Part 423. Stormwater discharges exposed to industrial activities from the shipyards are regulated under general permit VAR051211 for the Reedville side; VAR051221 for the Fairport side. A barge operation to ship fishmeal by water also occurs at the facility. However, no discharge to state waters is being allowed from this activity. BMPs and Stormwater Pollution Prevention Plans are implemented through the stormwater general permits to ensure no adverse discharge of pollutants to state waters occurs from the activity. It is suggested that the monitoring of the ambient water quality at the boat maintenance areas be incorporated into the sites' BMP and Stormwater Pollution Prevention Plans.
10) During effluent limitation analysis and development for the December 2005 permit, the most recent 10 years of ambient water quality data rather than the period of record (1968 to 2003) was used in the calculation of the wasteload allocations for Outfall 001, 002, and 995 because the period of record was not believed to be representative of current ambient conditions. The

permittee was required to establish an in-stream monitoring plan for Cockrell Creek to provide a complete and current record with which to determine compliance with the ammonia water quality standards. The plan included monthly monitoring for temperature, pH, salinity and ammonia at three locations 20 feet from Outfalls 001, 002, and 995 and was approved by the DEQ Piedmont Regional Office on January 13, 2006. As part of the 2011 permit reissuance, the ambient water quality data for Cockrell Creek was reviewed, and it was determined that the collected data was inconclusive as to the impact of the discharges of ammonia on the water quality of Cockrell Creek as it appeared as though the data may have been collected within the regulatory approved mixing zone for each outfall. Additionally, review of the data collected at DEQ monitoring stations upstream and downstream of the discharge did not indicate any violations of the water quality standard for ammonia. Therefore, the in-stream monitoring plan was discontinued.

11) § 62.1-44.19:15. A. of the *Code of Virginia* requires owners or operators of expanded facilities to offset any increase in delivered total nitrogen and delivered total phosphorus loads resulting from any expansion beyond the waste load allocations or permitted design capacity as of July 1, 2005, and requires owners or operators of new facilities to offset the entire delivered total nitrogen and total phosphorus loads discharged. It is noted that for Outfall 002, the maximum 30 day flow increased from 0.265 MGD in the 2011 permit application to 0.160 MGD with the 2016 permit application. The long term average flow from Outfall 002 has also decreased as the facility continues to reuse treated wastewater for various processes in the plant. Because there have been no expansions at the facility, annual average nutrient concentration limitations are not being included in the permit.
12) As explained in Item 9 above, the permittee eliminated the use of the aerated ponds, DAF, and UV disinfection units from the Outfall 002 treatment train. The permittee is keeping the ponds on site for emergency storage. The discharge of any water, including storm water, collected in the ponds and discharged through Outfall 002 must meet the limitations for Outfall 002 specified in Part I.A.1 of the permit.

c. Other Agency Comments:

1) EPA Comments: EPA has categorically waived the right to comment on draft permits for minor facilities that do not include limits to comply with a TMDL other than those for bacteria TMDLs.
2) VDH Comments: Coordination with VDH was submitted on February 5, 2016; a response was received February 17, 2016; See **Attachment N.** A coordination letter was submitted to VDH – Division of Shellfish Sanitation on February 5, 2015; no response was received.
3) DCR-DNH Comments: A coordination project was sent to the DCR – Division of Natural Heritage on February 16, 2016. A response was received on March 17, 2016. See **Attachment N**.
4) USFWS Comments: Coordination with the USFWS was submitted on February 16, 2016; a response was received on March 4, 2016. See **Attachment N**.

d. Owner Comments: TBD See **Attachment P.**

e. Public Notice Comments: TBD

f. Localities Notification: In accordance §62.1-44.15:01.A.2, 9 VAC25-31-290.G.2 and GM11-2005, the County of Northumberland (Board of Supervisors Chair and County Administrator) and the Northern Neck Planning District Commission were notified of the public comment period and sent the legal notice for the draft permit in a letter dated XXXX, 2016.

25. **Summary of Attachments**

A. Flow Frequency Memo and 303(d) Fact Sheets
B. Facility Operations Diagram
C. Topographic Map
D. Ambient Monitoring Data for 7-COC001.61
E. 1976 VIMS Model for Cockrell Creek
F. Site Inspection Report

G. 1998 Dilution Ratios Model – Outfall 002
H. Effluent Limitation Development – Outfall 002
I. Whole Effluent Toxicity Testing Evaluation – Outfall 002
J. Effluent Limitation Development – Outfall 995
K. Refrigeration Water Evaluation
L. Groundwater Monitoring Data Evaluation
M. NPDES Permit Rating Worksheet
N. VDH, VDH-DSS, DCR-DNH and USFWS Coordination Responses
O. 316(b) Interim BTA Questionnaire and CWIS photographs
P. Owner Review Comments
Q. TBD